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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/018,553      | 04/04/2002  | Kunihiro Ichimura    | IKE-C186            | 4733             |

7590 02/10/2004

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EXAMINER

SCHILLING, RICHARD L

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1752

DATE MAILED: 02/10/2004

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/018,553

Applicant(s)

Ichimura et al

Examiner

RL Schilling

Group Art Unit

1752

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- ☒ Responsive to communication(s) filed on 12-20-01
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-6 is/are pending in the application.
- ☐ Of the above claim(s) is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 1-6 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
  - ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_
  - ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 3
- ☐ Interview Summary, PTO-413
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

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1. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. § 103(a) as being unpatentable over European Patent Publication 654,611 in view of the combination of Grasshoff et al., Borrer et al. and Busman et al. The European Patent Publication (see particularly pages 9, 15 and 30-33; Examples 7, 9, 10B, 11, 4, 1A) discloses photosensitive coloring compositions comprising pigment precursors having at least one nitrogen atom substituted with alkoxycarbonyl blocking group as set forth by Formula 1 of the instant claims and a photoacid compound that generates an acid upon exposure to light or heat. The European patent does not disclose the use of a secondary acid generator or acid proliferation agent that generates new acid by reacting with an acid released by exposure of the photoacid. However, Grasshoff et al. (see particularly column 1, lines 15-50; column 3, lines 19-29; column 4, lines 3-18; column 14, line 55 - column 15, line 37; column 28, lines 33-38) disclose that dramatic increases in

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sensitivity of photosensitive compositions containing photoacids can be achieved by using a secondary acid generator or acid amplifier that releases multiple moles of acid by catalytic reaction with one mole of acid released by exposure of the photoacid. The released acid in Grasshoff et al. is used in imaging systems including polymerization and color change wherein the acid causes a change in color in imaging dyes including those of U.S. Patent 4,602,263 of Borrer et al. The coloring compounds of Borrer et al. (see particularly column 3, line 4 - column 4, line 52) comprise nitrogen containing chromophores with the nitrogen atom blocked with tertiary alkyl carbamate as in the European patent publication <sup>and</sup> ~~in~~ Formula 1 of the instant claims. Similarly, Busman et al. (see particularly column 1, lines 40-66) discloses that it is known in the art to increase the sensitivity of photosensitive compositions comprising photoacids by using a secondary acid generator to amplify the amount of acid by releasing several moles of acid for each mole released by exposed photoacid. Therefore, it would be obvious to one skilled in the art to use the secondary acid generators or amplifiers as disclosed in Grasshoff et al. and Busman et al. in the photosensitive compositions of the European patent publication comprising photoacids and blocked pigment precursors in order to increase the sensitivity of the photosensitive compositions in the European patent publication by release<sup>of</sup> more molecules of acid

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for each acid released by the photoacid. It would be particularly obvious to one skilled in the art to use secondary acid generators or acid amplifiers since Grasshoff discloses that they may be used in combination with blocked coloring materials as in Borrer et al. which have nitrogen atoms blocked by the same blocking groups as disclosed in the European patent publication.

2. The prior art submitted by applicants has been considered. Hall-Goulle et al. is cited of interest in the art as disclosing pigment precursors in imaging elements. Schacht et al. is cited of interest in the art as disclosing pigment precursors with acid cleavable groups.

3. Any inquiry concerning this communication should be directed to Mr. Schilling at telephone number (571) 272-1335.

RLSchilling:cdc

January 29, 2004

RICHARD L. SCHILLING  
PRIMARY EXAMINER  
GROUP 4100 1752

